

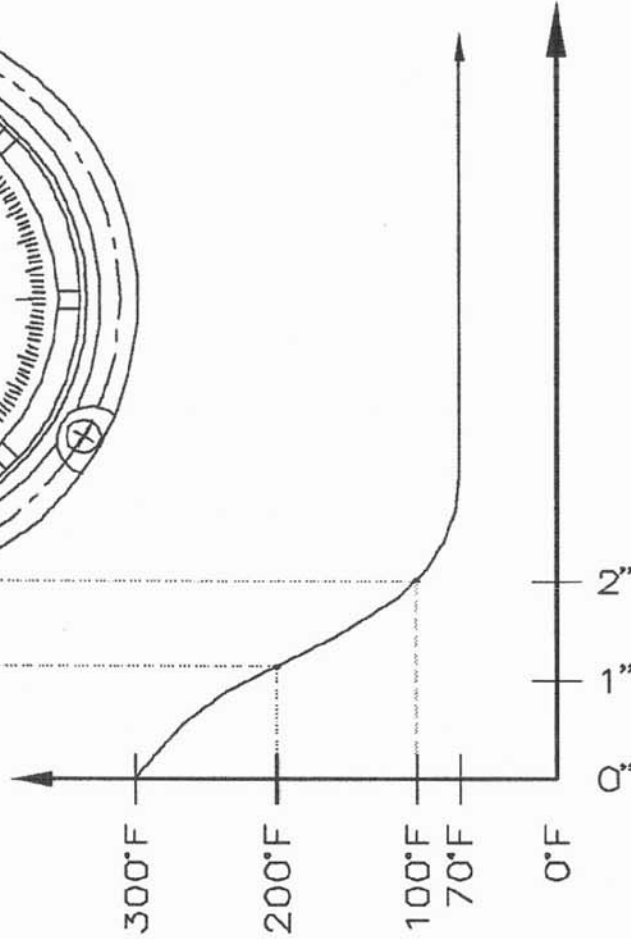
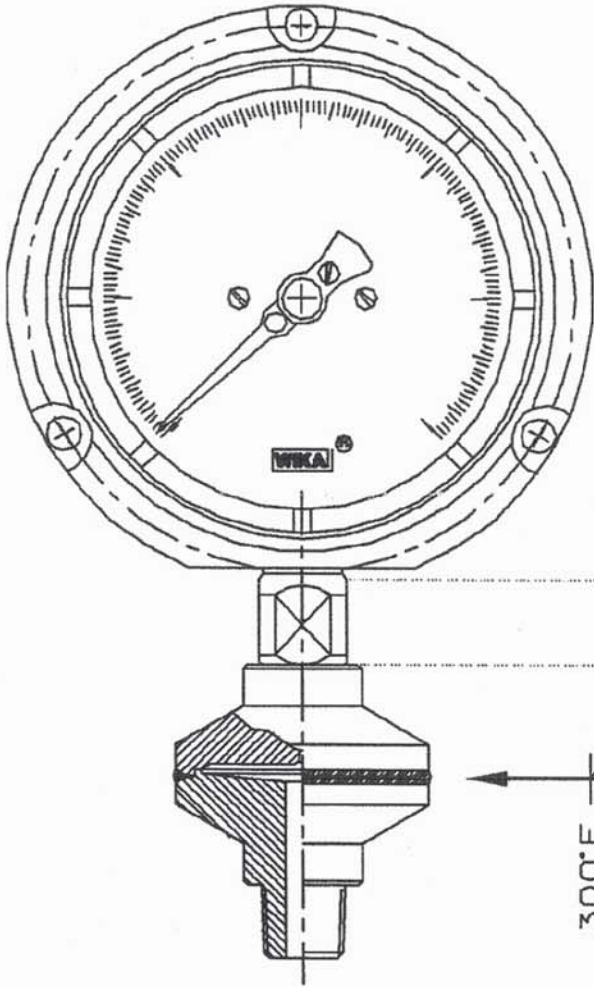
## Pressure Gauge Configurations for High-Temperature Applications

The recommended media temperature for WIKA pressure gauges is 140° F for brass wetted parts and 212° F for stainless steel wetted parts. For certain processes in which media reaches temperatures above 212° F, several accessories are available to prevent damage to the instrument and maintain instrument performance and accuracy.

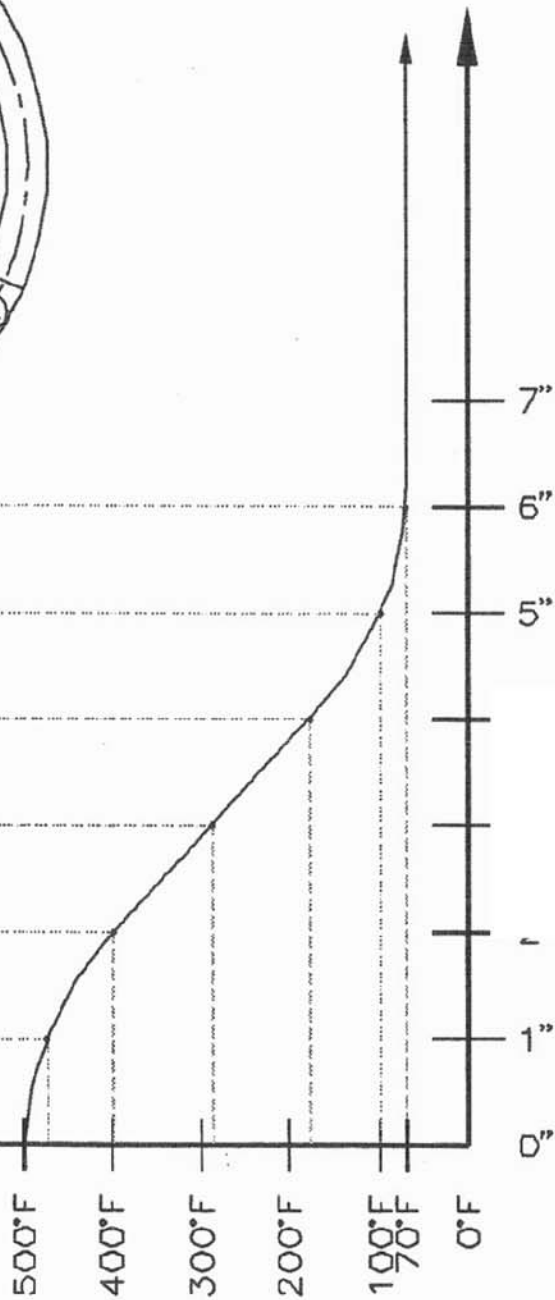
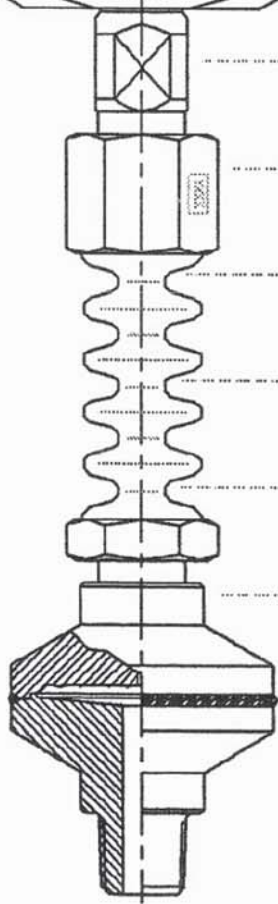
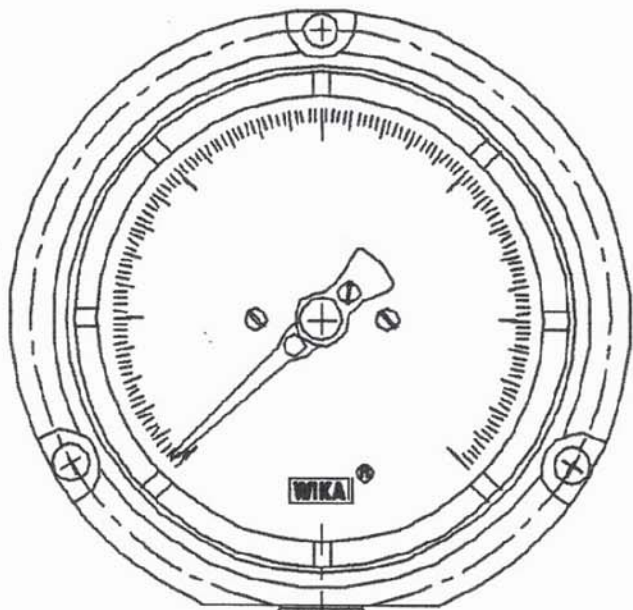
Below are recommended gauge configurations for specific media temperature ranges. Note that the maximum ambient temperature is 140° F and should not be exceeded. These temperature reduction techniques are general recommendations and many conditions such as ambient temperature, media type, and process configuration may affect the amount of temperature reduction.

- Up to **140° F** – All pressure gauges may be used.
- Up to **212° F** – A gauge with stainless steel wetted parts must be used. Ex: 23X.34, 23X.53, 23X.54, 23X.50, and 23X.30. No brass wetted parts should be used.
- Up to **287° F** – Accessories are required to maintain gauge performance and accuracy. The available options, from least to most expensive are:
  - **Long Pipe** – ½" in diameter or greater in either steel or stainless steel construction with a stainless steel wetted parts gauge. A general temperature reduction of about 75° F/ft. can be achieved. Pipes can be cut and threaded to desired length.
  - **Pigtail or Coil Siphon** – with a stainless steel wetted parts gauge. Has a general temperature reduction of about 75° F/ft. Mainly used for steam or vapor applications. Custom configurations are available.
  - **Cooling Element** – with a stainless steel wetted parts gauge. Has a general temperature reduction of 75° F/4" element. Can be combined with other accessories to reduce the temperature further (ex. long pipe, siphon, diaphragm seal, etc.).
  - **Cooling Tower** – with a stainless steel wetted parts gauge can be used up to temperatures of **312° F**. Has a general temperature reduction of 100° F/8" cooling tower. Cooling towers may be prone to clogging because they use a thin coiled capillary tube. This option is recommended on clean media or gases.
  - **Armored Capillary Tube** – used with a stainless steel wetted parts gauge. Has a general temperature reduction of 75° F/ft. Two feet of capillary tube can increase the media temperature range to 362° F. Capillaries are cut to a standard length of five feet and are provided with thread connections; however, different lengths are available as an option. Gauge must be mounted separate from the process by a mounting bracket or a flange and the extra capillary length can be rolled up if needed. Capillaries may be prone to clogging. This option is recommended on clean media or gases.
- Up to **300° F** – A diaphragm seal is recommended on a stainless steel wetted parts gauge. A high temperature system fill is required. See attached drawings. Consult factory for more information.

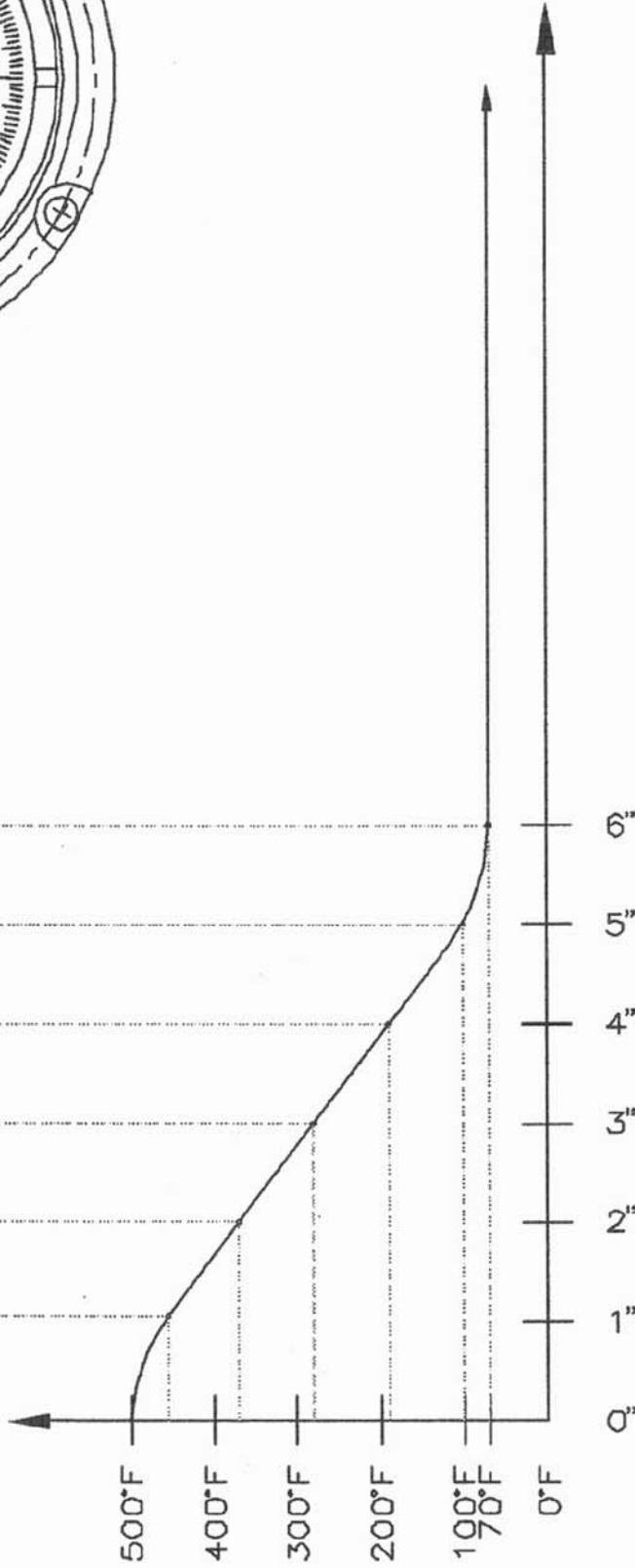
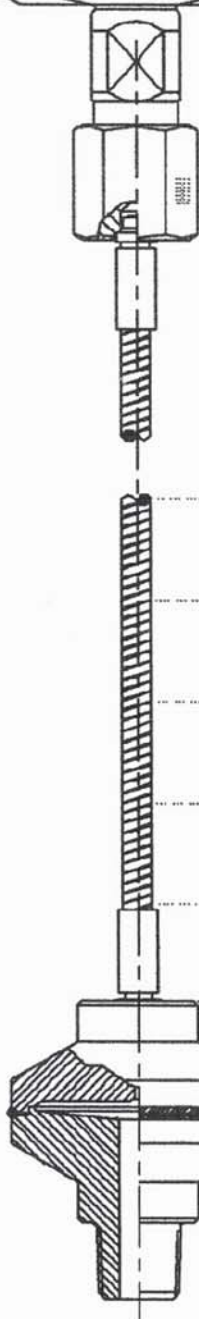
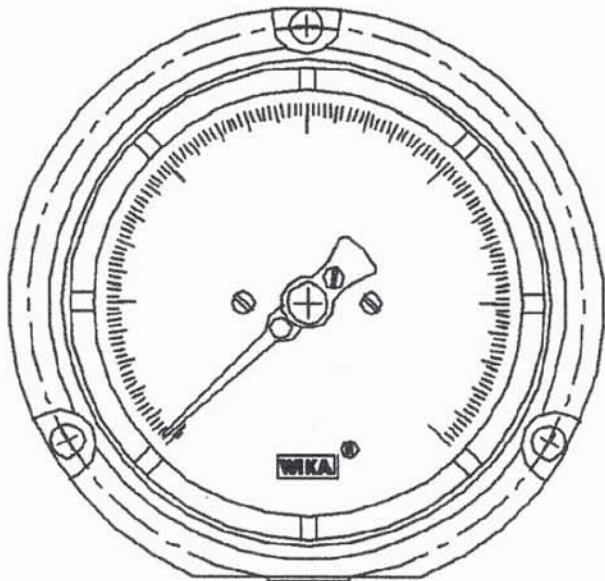
- Up to **500° F** – A diaphragm seal with a 4" cooling element is recommended on a stainless steel wetted parts gauge. A high temperature system fill is required. See attached drawings. Consult factory for more information.
- Up to **750° F** – A diaphragm seal with an 8" cooling tower is recommended on a stainless steel wetted parts gauge. A high temperature system fill is required. See attached drawings. Consult factory for more information.
- Up to **750° F** – A diaphragm seal with 5' of armored capillary tube is recommended on a stainless steel wetted parts gauge. A high temperature system fill is required. See attached drawings. Consult factory for more information.



NAME		DIMENSIONAL DRAWINGS	
WIKAI WIKAI INSTRUMENT CORP. Lawrenceville, GA 30043		TEMPERATURE CHARACTERISTICS GAUGE and SEAL	
THIS DOCUMENT AND ALL INFORMATION HEREON IS THE PROPERTY OF WIKAI INSTRUMENT CORPORATION AND MAY NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.		DATE	CHKD/APPD
ISO A		DWN	DATE
SCALE		DWN	DATE
NTS		TU	07/08/02
UNLESS OTHERWISE SPECIFIED: FRACTIONS ± 1/64 XX DECIMALS ± .01 XXX DECIMALS ± .005 ANGLES ± 1/2° UNITS = INCHES		DWG. NO. 2394711-5	
MATERIAL XXXX		REV. NO. 0	
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CRITICAL DIMENSION		DATE 07/01/02	
E. R/N		BY	

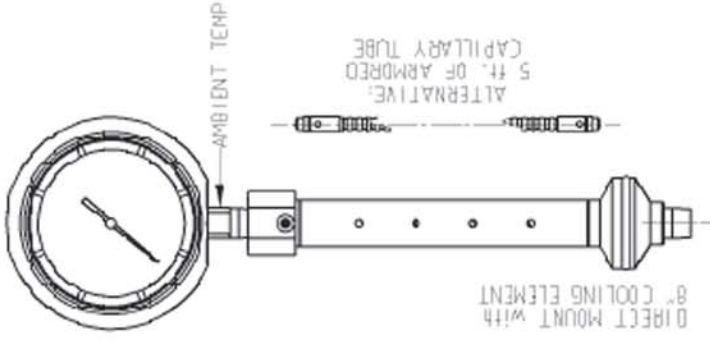
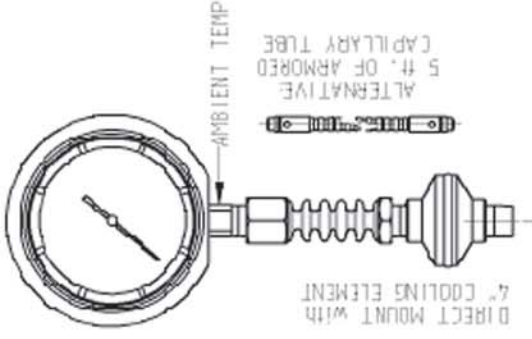
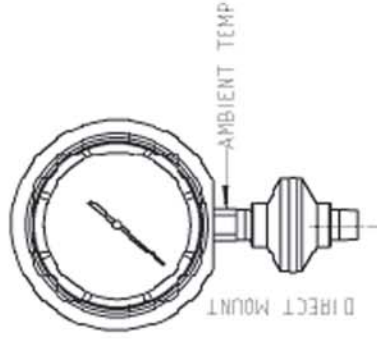
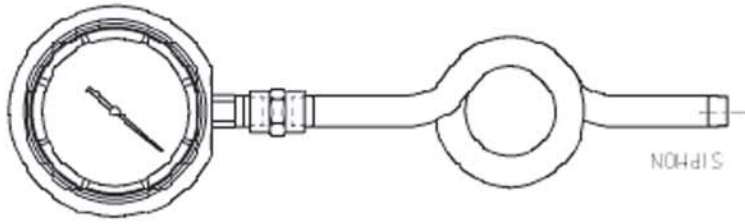


NAME		DIMENSIONAL DRAWING	
WIKAI WIKAI INSTRUMENT CORP. LAWRENCEVILLE, GA 30043		TEMPERATURE CHARACTERISTICS GAUGE and SEAL with COOLING ELEMENT	
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ISO A		CHKD/APPD	SH OF
SCALE	DWN	DATE	REV
NTS	TU	07/08/02	1 1 0
MATERIAL		P014	
UNLESS OTHERWISE SPECIFIED:		PRODUCT CODE	
FRACTIONS	± 1/64	CRITICAL DIMENSION	
XX DECIMALS	± .01	0	
XXX DECIMALS	± .005	4559 07/01/02 RW	
ANGLES	± 1/2'	DATE BY	
UNITS	= INCHES	E. R/N	



NAME		DIMENSIONAL DRAWING	
WIKAI WIKA INSTRUMENT CORP. Lawrenceville, GA 30043		TEMPERATURE CHARACTERISTICS GAUGE and SEAL with CAPILLARY LINE	
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NTS	TU	07/08/02	1 1 0
MATERIAL		P014	
XXXX		UNLESS OTHERWISE SPECIFIED:	
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		XXX DECIMALS ± .005	
		ANGLES ± 1/2°	
		UNITS = INCHES	
REV NO.	E. R/N	DATE	BY
0	4559	07/01/02	RW
CRITICAL DIMENSION			

CAPILLARY ALTERNATIVE:  
WHEN USING CAPILLARY TUBE, THE GAUGE  
REQUIRES A MOUNTING BRACKET OR OTHER  
MOUNTING DEVICE.



HIGH TEMPERATURE  
SEAL DESIGN



TYPICAL STEAM  
APPLICATION



300°F



500°F



750°F

PROCESS TEMPERATURE

IT IS RECOMMENDED THAT THESE  
ASSEMBLIES ARE BACK WELDED.

GAUGE - SEAL PN292;

REV	E.C. NO.	NAME	COMPARISON CHART for TEMPERATURE APPS GAUGE/SEAL ASSEMBLY OPTIONS		DWG. NO
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		XXX DECIMALS ± .005			
		ANGLES ± 1/2° (10)			
		Ra (MAX) 125µm			
		FIRST RELEASE			
		04/24/08			
		CRITICAL DIMENSIONS			
		ISO A			
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